Oct. 22, 1957 D. E. KESSLER 2,810,506

ONE-PIECE CONVERTIBLE CONTAINER

Filed Nov. 12, 1954 2 Sheets-Sheet 1

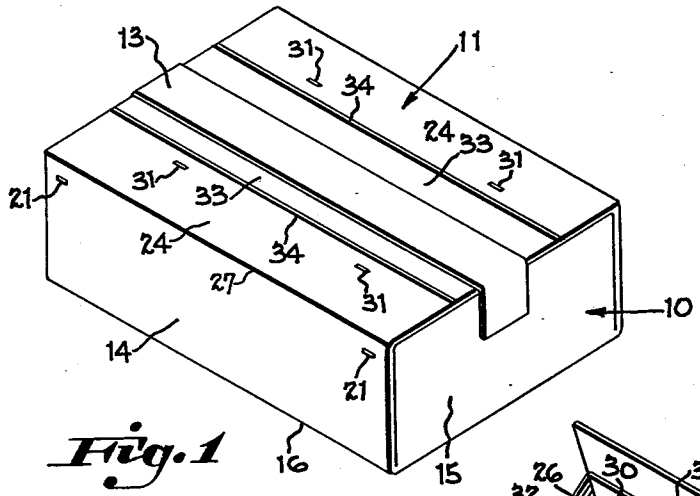


Fig. 1

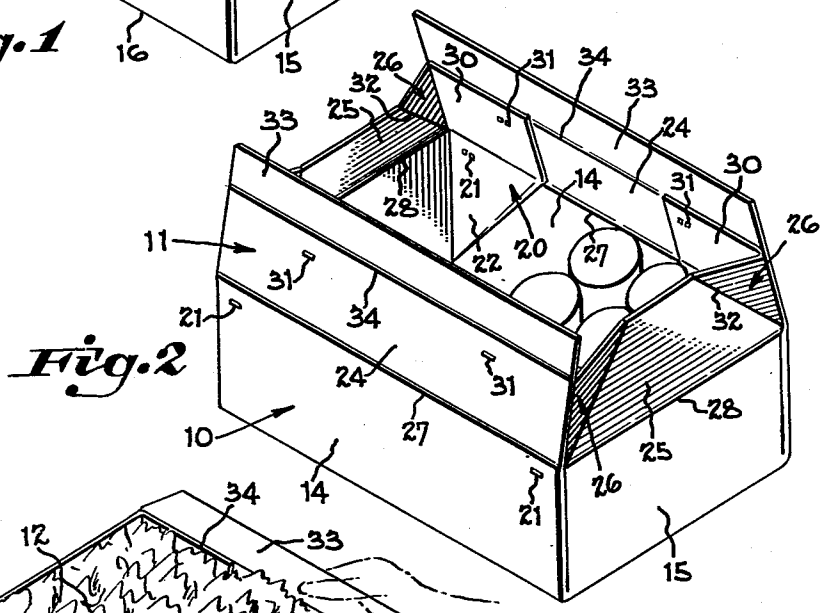


Fig. 2

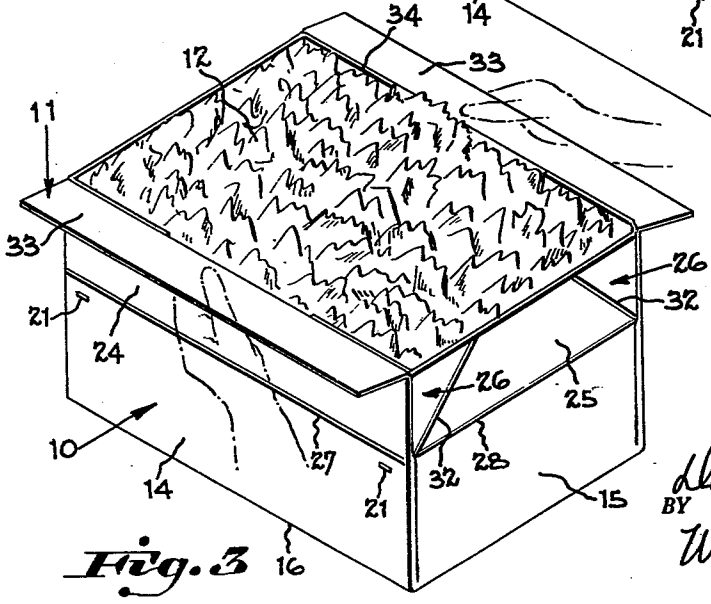


Fig. 3

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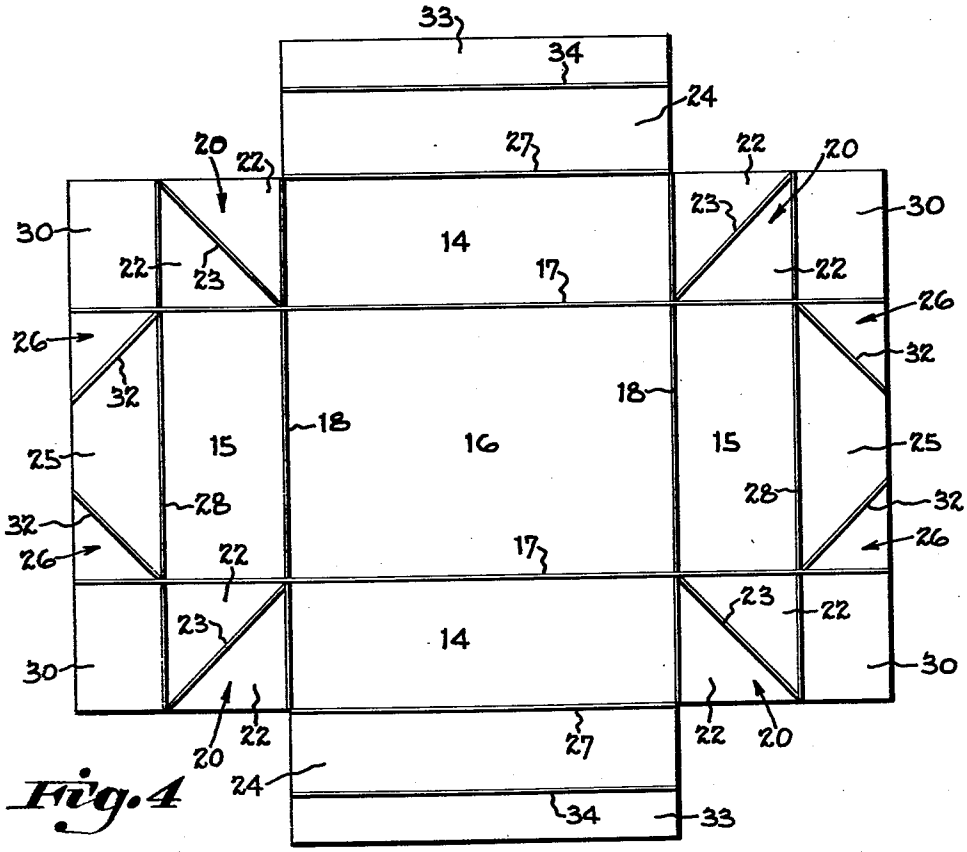


Fig. 4

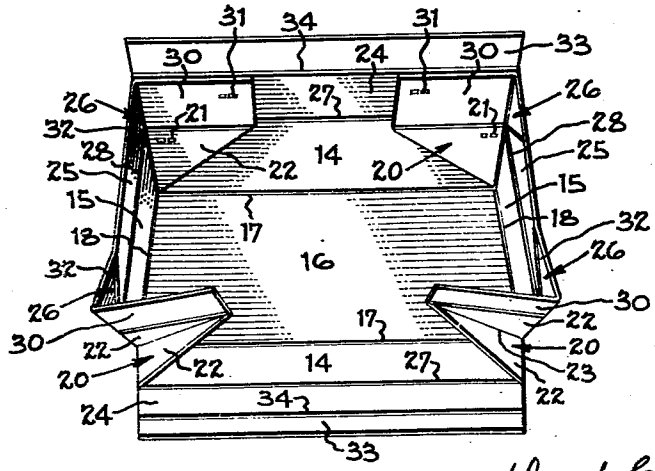


Fig. 5

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2,810,506

ONE-PIECE CONVERTIBLE CONTAINER

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Application November 12, 1954, Serial No. 468,318

2 Claims. (Cl. 229—31)

This invention relates to a container or package for canned beverages such as beer, the container being particularly adapted to provide for the icing of the canned beverage in the container by the purchaser.

A container of this general type is disclosed in the copending application of David E. Kessler, Serial No. 442,792, filed July 12, 1954. The container of the copending application is of two-piece construction, consisting of an outer or primary container having an extensible top section which forms the top of the carton when collapsed and which, when erected, provides an open container for confining cracked ice upon the tops of the canned beverage. To prevent leakage of water from the melting ice, and facilitate chilling of the cans, a liner, formed of waterproof sheet material, is inserted in the body portion of the container to envelop the cans and confine the ice water about them.

It is a primary object of the present invention to provide a container having the same advantages but which is of simplified, one-piece construction, eliminating the waterproof liner of the prior application.

The ice pack containers of the prior application and of this application are intended particularly for use on picnics, outings, fishing expeditions, and the like. Canned beer is a popular beverage for such occasions; however, the icing of the beer ordinarily involves a problem away from home. If the beer is iced in coolers or tubs, then the individual beer cans must be removed from the shipping container in which they are purchased, then repacked in the cooler with ice. Moreover, the coolers or tubs are bulky and must be transported to and from the outing. The ice pack containers eliminate these problems since they allow the beer to be iced in its original container without any handling of the cans.

The present structure briefly comprises a container in the form of a carton body to confine the cans of beer with their tops exposed, and an extensible top section, which when folded forms the top closure of the carton and which in erected position, forms a container for the cracked ice which is packed upon the tops of the cans in the carton. The container is fabricated from a one-piece blank of waterproof paperboard which is suitably configurated and scored to form a seamless waterproof carton, with the extensible top section forming an integral part of the top of the carton body. In order to make the carton waterproof, the four corners of the carton body are provided with one-piece gusset sections folded inwardly and thus providing a corner structure which is devoid by slots or perforations so as to prevent leakage of water. The carton body is erected from its blank simply by folding the gusset sections inwardly upon one another and attaching them by suitable means, such as staples, to the erected walls of the carton.

The erection of the carton body automatically brings the extensible top section to erected position. The top section is provided with connecting flaps at the four corners which form a part of the one-piece gussets of the

carton body. The connecting flaps reside against the side walls of the top extension when erected and are attached thereto, thus forming a connector at the four corners of the top section. In order to provide the convenient collapsing and erection of the top section, its end walls (or side walls if desired) are provided at the four corners with hinge sections which act as foldable links connecting the side and end walls, whereby the top section is conveniently erected and collapsed.

For convenience in carrying the ice carton, the side walls of the top section are provided with hand grip flaps which, upon erection of the top section, are bent outwardly for gripping purposes. In collapsed condition these flaps form a part of the top closure and meet at the center of the top closure.

The various features and advantages of the structure are disclosed in detail in the following description in conjunction with the drawings.

In the drawings:

Figure 1 is a perspective view of the container in packed and sealed condition.

Figure 2 is a perspective view showing the extensible top section of the container partially erected preparatory to packing the cracked ice therein.

Figure 3 is a perspective view of the container with the extensible top section erected and with the ice packed upon the cans of beverage confined in the body of the carton.

Figure 4 is a plan view of the one-piece blank of waterproof sheet material from which the container is erected.

Figure 5 is a perspective view of the container in the process of being erected from the blank shown in Figure 4.

Referring to Figure 2, the container consists of a lower body portion indicated generally at **10** and an extensible top section indicated at **11** which, when erected, forms a container for the cracked ice **12** (Figure 3) and, which when folded downwardly, provides the top closure of the carton as shown in Figure 1. In closed position, the top closure is secured upon the container preferably by means of a strip of sheet material **13** coated with a suitable adhesive and attached to the adjoining edges of the top section.

It will be noted in Figure 4, that the container is fabricated from a one-piece blank suitably scored to provide the integral carton body portion **10** and extensible top section **11**. Described in detail with reference to Figures 2 and 4, the carton body **10** consists of opposed side walls **14—14**, end walls **15—15** and a bottom panel **16**. The side walls **14** are joined to the bottom panel along the longitudinal score lines **17—17** and the end walls **15—15** are delineated by the transverse lines **18—18**.

The side and end walls are joined together at the four corners of the container by the one-piece gussets, indicated generally at **20** which, as best shown in Figure 5, are folded inwardly as the carton walls are erected. Since the gussets and wall sections are formed of a one-piece sheet blank, the body of the carton in erected condition forms a waterproof container devoid of seams or perforations. When the body portion is erected, the gussets **20** are folded inwardly against the side walls and attached preferably by the metal staples **21** in the conventional manner.

Described in detail, each gusset is in the form of a pair of triangular panels **22—22** delineated by the diagonal score line **23** (Figure 4) along which line the panels are joined together. The diagonal score lines **23** are impressed in the blank from a side which causes the gussets **20** naturally to spring inwardly of the carton body upon erection of its walls. The panels **22** are joined respectively to the side and end walls along the longi-

tudinal and transverse score lines **17** and **18**. Upon erection of the side and end walls, the triangular panels of the gussets are folded inwardly upon one another and are then hinged laterally against the side walls and stapled thereto, as indicated above.

It will be apparent that upon erection of the side and end walls, the collapsible top section **11**, which forms an extension of the side walls, is also brought automatically to its erected condition, as shown in Figure 2. In general, the top section comprises a pair of side walls **24—24** joined to a pair of end walls **25—25**, each end wall having a diagonal hinge section, indicated generally at **26** at the four corners of the top section. The sections **26**, by their hinge action, provide links which force the end walls **25** inwardly as the side walls **24** are forced downwardly toward closed position upon the carton body.

Described in detail with reference to Figure 4, the side walls **24** of the top section are joined to the side walls **14** of the carton body along the longitudinal score lines **27**, which are parallel with the score lines **17**. The end walls **25** of the top section are joined to the end walls **15** at the carton along the score lines **28**. The score lines **27** and **28** are spaced equally from score lines **17** and **18**, such that they lie in the same horizontal plane (Figure 2) when the container is erected.

In order to join the side and end walls **24** and **25** of the top section, a connector flap **30** is formed at opposite ends of the end walls **25**. The connector flaps are delineated by the longitudinal score lines **17** and by the transverse score lines **28**. When the carton body **10** is erected, with the gussets **20** folded inwardly along score line **23**, the connector flaps assume their erected position since they are integral with the upper edges of gussets. Therefore, when the gussets **20** are stapled to the side walls **14**, as indicated at **21**, an additional staple **31** is applied to the connector flaps to attach them to the side walls **24** of the top section.

As shown in Figure 4, the end walls **25** of the top section are provided with diagonal score lines **32** which delineate the hinge sections **26**. The diagonal score lines extend from the intersection of the longitudinal score lines **17** and transverse score lines **28** and converge inwardly toward one another, terminating at the outer edge of each end wall. The score lines **32** are impressed from a side of the panel to form hinge lines which tend naturally to cause the end walls **25** to spring inwardly toward one another as shown in Figure 2. In this condition the end walls **25** are readily collapsed when the side walls **24** are folded inwardly and downwardly.

Referring to Figure 3, the upper edges of the collapsible top section are provided with hand grip flaps **33—33**. These flaps provide a convenient gripping means by which the iced container may be carried about. When the top section is folded down, the flaps **33** form a part of the top closure as shown in Figure 1.

As shown in Figure 4, the hand grip flaps **33** form a part of the side walls **24** and are delineated by the score lines **34**. After the carton is opened and the top section erected, the hand grip flaps are simply folded outwardly along their score lines to a position to be gripped conveniently.

From the foregoing, it will be observed that the one-piece container forms a rugged structure which is erected very conveniently for icing purposes. After the ice is packed in, the water from the melting ice is confined without leakage in the carton body by virtue of the one-piece gussets **20** which provide a watertight container which is devoid of all joints or seams.

Having described my invention I claim:

1. A one-piece convertible container for canned beverages providing a carton for confining the cans and a collapsible top section which, when erected, provides an open receptacle for confining ice upon the top of the cans, the top section upon being collapsed providing a flat top closure for the carton which overlies the tops of

the cans therein, said carton comprising a rectangular bottom, a pair of side walls and a pair of end walls, said side and end walls delineated by longitudinal and transverse score lines intercepting one another, integral gussets joining said side and end walls together permanently in erected position at the corners of the carton, each of said gussets constituted by a pair of triangular panels delineated by portions of the longitudinal and transverse score lines which extend upwardly from the point of interception thereof at said bottom, a diagonal score line extending upwardly from said point of interception at said bottom and delineating a common side of each pair of triangular gusset panels, said triangular panels being folded inwardly upon one another along said diagonal score lines and attached facially to the side walls of the carton and securing the side and end walls permanently in erected position, said folded triangular gusset panels extending from the bottom of the carton to the upper edge thereof, and providing a waterproof seal, said collapsible top section comprising side and end wall extensions rising upwardly from the upper edges of the side and end walls of the carton and delineated by a second set of longitudinal and transverse score lines extending in planes parallel with said rectangular bottom, a respective hand grip flap extending from the outer edge of each side wall and delineated by a longitudinal score line extending parallel with the said second set of longitudinal score lines, respective connector flaps joining the side and end wall extensions together, each of said connector flaps having one edge joined to the upper edge of the adjacent triangular gusset panel and having a second edge joined to the edge of the adjacent end wall extensions, the end wall extensions each having a diagonal fold line converging inwardly and upwardly from the second set of transverse score lines and delineating respective triangular hinge sections which collapse inwardly between the side and end wall extensions and in facial contact therewith when the flat top section is collapsed to provide a top closure for the carton body, said top closure residing parallel with said bottom and confining the cans in the carton, said hand grip flaps foldable outwardly and reinforcing the side wall extensions upon erection of the top section, said hinge sections drawing the end wall extensions to an erected position when the side wall extensions are suspended in erect position by gripping the hand grip flaps.

2. A one-piece convertible container for canned beverages providing a carton for confining the cans and a collapsible top section which, when erected, provides an open receptacle for confining ice upon the top of the cans, said top section when collapsed providing a flat top closure for the carton body which overlies the tops of the cans, said carton comprising a rectangular bottom, a pair of side walls and a pair of end walls, said side and end walls delineated by longitudinal and transverse score lines intercepting one another, integral gussets joining said side and end walls together permanently in erected position at the corners of the carton, each of said gussets constituted by a pair of triangular panels delineated by portions of the longitudinal and transverse score lines which extend upwardly from the point of interception thereof at said bottom, a diagonal score line extending upwardly from said point of interception at said bottom and delineating a common side of each pair of triangular gusset panels, said triangular panels being folded inwardly upon one another along said diagonal score lines and attached facially to the side walls of the carton body and securing the side and end walls permanently in erected position, said folded triangular gusset panels extending from the bottom of the carton to the upper edge thereof and providing a waterproof seal, said collapsible top section comprising side and end wall extensions rising upwardly from the upper edges of the side and end walls of the carton and delineated by a second set of longitudinal and transverse score lines extending in a plane par-

allel with said rectangular bottom, the side wall extensions rising upwardly above the end walls a distance at least one-third greater than the height of the end walls, a hand grip flap on each side wall extension, respective score lines extending parallel with the said second set of longitudinal score lines and delineating said flaps, respective connector flaps joining the side and end wall extensions together, each of said connector flaps having one edge joined to the upper edge of the adjacent triangular gusset panel and having a second edge joined to the edge of the adjacent end wall extensions, the end wall extensions each having a diagonal fold line converging inwardly and upwardly from the second set of transverse score lines and delineating respective triangular hinge sections which collapse inwardly between the side and end wall extensions and in facial contact therewith when the top section is collapsed to provide a top closure for the carton body, said side wall extensions and hand grip flaps foldable downwardly providing a flat closure residing parallel with said bottom which converts the container into a carton upon collapse of the top section, said hand grip flaps foldable outwardly and reinforcing the side wall extensions upon erection of the top section, said hinge sections drawing the end wall extensions to an erected position when the side wall extensions are suspended in erected position by gripping the hand grip flaps.

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